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Coffield Ungaretti & Harris

CHICAGO OFFICE:
3500 Three First National Plaza, Chicago, Illinois 60602
Telephone: 312/977-4400 · Fax: 312/977-4405

WASHINGTON OFFICE:
1747 Pennsylvania Avenue, N.W., Suite 900, Washington, D.C. 20006
Telephone: 202/872-4310 · Fax: 202/833-1274

VIA MESSENGER

July 23, 1993

Mr. Wayde Hartwick
Waste Management Division
U.S. Environmental Protection Agency
111 West Jackson
Mail Code HSRL-6J
Chicago, IL 60604

Re: American Chemical Service, Griffith, Indiana
Statement of Work

Dear Wayde:

Enclosed for your information is a marked up copy of the first six pages of the ACS Statement of Work. We used U.S. EPA's original draft of the Statement of Work and inserted the changes agreed upon during the July 22, 1993 meeting. Square brackets indicate an unresolved item. I am confident these changes are consistent with your notes.

Very truly yours,

Jennifer T. Nijman

Jennifer T. Nijman

JTN:dlc
Enclosure
cc: Steven Siegel (w/Encl.)
Andrew Perellis (w/Encl.)
Barbara Magel (w/Encl.)
Joseph Adams (w/Encl.)
Martin Hamper (w/Encl.)
Ronald Frehner (w/Encl.)
Gordon Kuntz (w/Encl.)

STATEMENT OF WORK FOR
THE REMEDIAL DESIGN AND REMEDIAL ACTION
AT
AMERICAN CHEMICAL SERVICES INC. SITE
LAKE COUNTY
GRIFFITH, INDIANA

I. PURPOSE

The purpose of this Statement of Work (SOW) is to set forth requirements for implementation of the remedial action set forth in the Record of Decision (ROD), which was signed by the Regional Administrator of U.S. EPA Region V on September 30, 1992, for the American Chemical Services Inc. (ACS) Site (Site). The Settling Defendants shall follow the ROD, the SOW, the approved Pre-Design Work Plan, the approved Remedial Design Work Plan, the approved Remedial Action Work Plan, U.S. EPA Superfund Remedial Design and Remedial Action Guidance, and any additional guidance specified by U.S. EPA unless application of such additional guidance would be arbitrary and capricious, in [submitting] [preparing] deliverables for designing and implementing the remedial action at the ACS Site.

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II. DESCRIPTION OF THE SITE, REMEDIAL ACTION, AND PERFORMANCE STANDARDS

II.A.1. Description of the Site

ACS is located at 420 S. Colfax Ave., Griffith, Indiana, and includes ACS property (19 acres), the Pazmey Corp. property (formerly Kapica Drum, Inc, now owned by Darija Djurovic.; two acres) and CSX property (2 acres) ~~and the inactive portion of the Griffith Municipal Landfill (approximately 15 acres)~~. The ACS Superfund Site includes all these properties (Figure 1). The site is bordered on the east and northeast by Colfax Avenue. The Chesapeake and Ohio railway bisects the site in a northwest-southeast direction, between the fenced On-site Area (north) and the Off-site Area (south). On the west and northwest, south of the Chesapeake and Ohio railway, the site is bordered by the abandoned Erie and Lackawanna railway and ~~the active portion of~~ the Griffith Municipal Landfill. North of the Chesapeake and Ohio railway, the site is bordered on the west by wetland areas. The northern boundary of the site is formed by the Grand Trunk railway. Surface water runoff is generally to the west and south. The site is fully described in the Remedial Investigation Report. ~~Surface water runoff appears to be confined to the site by drainage to the wetlands and subsequent infiltration. There appears to be no direct connection between site surface water drainage and local streams, however, ground water does discharge to the wetlands and the wetlands are ultimately drained by Turkey Creek, approximately 1 1/2 miles south of the site. Developed land around the site is used for single family residences and industrial purposes.~~

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II.A.2. Performance Standards

Settling Defendants shall design and implement the Remedial Action to meet the performance standards and specifications set forth in the ROD and this SOW. Performance standards are ~~shall include~~ risk based cleanup standards provided in Appendices A & B of this SOW, and the cleanup levels and treatment standards set forth below, standards of control, quality criteria and other substantive requirements, criteria or limitations including all Applicable or Relevant and Appropriate Requirements (ARARs) set forth in the ROD, SOW and/or Consent Decree. Risk based ~~C~~cleanup Standards have been set for the site based on the risk assessment developed for the Site, U.S. EPA's Risk Assessment Guidance for Superfund (RAGS), and Federal, State, and local regulations Groundwater will be remediated to achieve a cumulative cancer risk of 1.3 x 10-5 for carcinogenic contaminants, shall in no instance exceed MCLs, and shall achieve a cumulative non-cancer risk of Hazard Index (HI) <1. [The cleanup level for lead is 500ppm.] The cleanup level for PCBs is 10ppm with a 10 inch soil cover, and 1ppm with no cover. The LTTT treatment standard for PCBs is 2ppm.

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II.A.3. Summary of Remedial Action

The major components of the selected remedial action include:

- Ground water pumping and treatment system to dewater the site to facilitate waste excavation and a ground water pump and treatment system ~~and~~ to contain the contaminant plume with subsequent discharge of the treated ground water from the systems to surface water or a POTW (determined to be in compliance by United States Environmental Protection Agency "U.S. EPA" and the Indiana Department of Environment Management, "IDEM", together referred to as the "Agencies") and wetlands;

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- Excavation of intact ~~approximately 400~~ drums in the On-site Containment Area for offsite incineration. Contents of leaking drums or portions of drum carcasses containing materials may be treated by on-site LTTT.;

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- Excavation of buried waste materials/Source Areas (as defined in the ROD and this SOW) and ~~treatment by~~ low-temperature thermal treatment (LTTT). Treatment residuals meeting performance standards will be re-deposited on-site;

- Contaminated soils containing lead >500ppm will be excavated and sent off-site for disposal;

- On-site treatment or off-site disposal of treatment condensate;

- Vapor emission monitoring and, if the Agencies deem necessary, in accordance with the SOW, control during excavation and possible immobilization of inorganic contaminants after LTTT;

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- Off-site disposal of miscellaneous debris;

- In-situ vapor extraction pilot study of buried waste in On-site Area;

- In-situ vapor extraction of contaminated soils;

- [Continued evaluation and monitoring of wetlands and, if necessary, remediation;]

- Long term ground-water monitoring;

- Fencing the site and possible implementation of deed and access restrictions and deed notices; and

- Private well sampling with possible well closures or ground water use advisories if the Agencies deem necessary, in accordance with the SOW.

II.B.~~A.~~ Site Security

The Settling Defendants shall install and maintain a fence(s) at the Site to prevent access and vandalism to the Site. Fencing of the Site shall consist of a chain link fence(s) around the perimeter which is a minimum six-feet high with a minimum three-strand barbed wire, unless otherwise agreed to by the parties. The existing fence at the site may be utilized if it meets the design criteria. ~~The fence shall border, at a minimum, the ACS site as shown in Figure 1.~~ The exact location of the fence(s) will be identified in the pre-design work plan and approved by U.S. EPA. Warning signs shall be posted at 200-foot intervals along the fence and at all gates. The warning signs shall be approved and ~~advise that the area is hazardous due to chemicals in the soils which pose a risk to public health through direct contact. The signs shall also provide a telephone number to call for further information.~~ The fence shall be completed as part of pre-design activities.

II.C.~~B.~~ Restrictive Covenants/Deed Restrictions

Within 15 days after the entry of this Consent Decree, Settling Defendants shall request that the ACS site property owners execute and record with the Lake County recorder restrictive covenants to ensure that, except for construction required by this SOW, no construction or installation of drinking water wells occurs on-site which may increase the likelihood of exposure to remaining contaminants; and to ensure that there is no interference with the operation and maintenance of treatment and monitoring systems required by this remedial action. Settling defendants shall exercise their best efforts to implement these deed and access restrictions. Any owner of property within the ACS site that is a

settling defendant shall execute and record the above required restricted covenants within 15 days of entry of the consent decree.

II.D.~~C.~~ Identification of contaminated ground water

~~[~~Settling Defendants shall perform sufficient additional sampling to identify the horizontal and vertical extent of ground water contamination in order to access the degree of off-site contaminant migration and to design an effective ground water treatment system.~~]~~ ~~(PRPs request a limited number of wells)~~ NO!

II.E.~~D.~~ Identification of buried waste and contaminated soils for Low-Temperature Thermal Treatment (LTTT) and In-situ Vapor Extraction (ISVE)

Settling Defendants shall ~~fully~~ identify the horizontal and vertical extent of buried waste and contaminated soils ~~contaminated at levels~~ exceeding ~~any of the Cleanup~~ Performance Standards ~~set forth in Section II(A)(2) of this SOW. described in the ROD. These Cleanup Standards are listed in Appendix A.~~ Settling Defendants shall ~~may~~ utilize a procedure which uses:

1. Field screening for identification and delineation of ~~source areas~~ buried wastes/source area to be excavated (this may be conducted concurrent with excavation);

2. Remedial investigation and supplemental investigation(s) data to approximately locate treatment systems; and

II.F. Confirmational Sampling and Evaluation of Residual Risk

Settling Defendants shall conduct confirmational sampling and analysis after excavation of buried waste/source areas to be treated by LTTT and after ISVE soil treatment to verify achievement ~~removal~~ of Performance Standards ~~all contaminates exceeding the Cleanup Standards set forth in Appendix A, provided they submit to U.S. EPA and the State (as part of the RD work plan) a plan detailing such a procedure.~~
(PRPs will draft language re Attachment 1 to be inserted here)

II.G.~~E.~~ ~~Design,~~ Construction, Installation and Operation of Treatment Systems for Remedial Action

1. Groundwater Restoration System

The Settling Defendants shall design and install a groundwater extraction and treatment system to restore groundwater in the ~~Area of Attainment~~ to ~~P~~performance ~~S~~standards. The Settling Defendants shall operate the groundwater extraction system

until the groundwater Pperformance Sstandards ~~(cleanup standards)~~ are met throughout the Area of Attainment. The Area of Attainment for groundwater Performance Standards ~~Cleanup Standards~~ shall include all areas outside the site boundary where the ACS groundwater plume contaminant ~~contamination~~ levels exceed the Pperformance Sstandards. Settling defendants shall have the burden of establishing that off-site contamination detected through implementation of this SOW is not attributable to the ACS site. ~~These groundwater performance standards shall consist of MCLs for those individual carcinogenic contaminants where the MCL corresponds to a cancer risk of less than 1 x 10-6. For individual contaminants where the MCLs exceed a 10-6 carcinogenic risk, the performance standards for the individual contaminants shall be levels that equal a carcinogenic risk of 1 x 10-6. The performance standards for individual noncancer contaminants consist of levels that represent a noncancer risk of Hazard Quotient (HQ)= 1. The performance standards are listed in Table 7 of the ROD which is attached hereto as Appendix B.~~

~~There are fifteen carcinogenic contaminants in Appendix B. Ten carcinogenic contaminants have performance standards set at a 1 x 10-6 level, resulting in a cumulative cancer risk of 1 x 10-5 for these ten contaminants. The other five carcinogenic contaminants have performance standards set at MCLs, resulting in a cumulative cancer risk of 3 x 10-6, for these five contaminants. The total cancer risk for the fifteen carcinogenic contaminants is therefore 1.3 x 10-5.~~

~~In the event risk-based performance standards for individual contaminants cannot be attained, the performance standards shall be based on a cumulative risk that shall not exceed a 1.3 x 10-5 cumulative cancer risk and a Hazard Index (HI) < 1.0 cumulative noncancer risk. Performance standards for individual contaminants based on MCLs cannot be exceeded.~~

If additional compounds are found to be above MCLs or Health based standards as identified in the ROD during any monitoring event, those compounds shall be added to Appendix B and Table 7 of the ROD and an appropriate groundwater performance standard will be calculated by U.S. EPA, after reasonable opportunity for review and comment by the State. The cumulative carcinogenic risk of 1.3 x 10-5 and cumulative HI less than 1.0, as specified in the ROD, shall not be exceeded. The carcinogenic risk and HI shall be calculated using the methods set forth in the Risk Assessment Guidance for Superfund (RAGS). (paragraph may be deleted)

The Settling Defendants shall install and operate an extraction system that shall consist of a network of wells designed to completely capture and remove contaminated

groundwater within and downgradient of the point of compliance defined in the ROD as the down-gradient site boundary. The Settling Defendants shall design the extraction wells to be capable of pumping sufficient quantities of groundwater to capture and extract the entire contaminated plume within the area of attainment.] (Delete this paragraph and insert a phrase into 1st paragraph of this section.) — Done

The Settling Defendants shall ~~pump~~ transfer the extracted groundwater to the groundwater treatment system for removal of chemicals to their discharge performance standards, as approved by U.S. EPA, after reasonable opportunity for review and comment by the State, prior to discharge to a POTW, to Turkey Creek or one of its tributaries and the western wetlands. Settling defendants shall meet the requirements of applicable Federal and State laws for ~~all conditions and limitations imposed by U.S. EPA, after reasonable opportunity for review and comment by the State, on~~ discharge of treated groundwater into surface waters and wetlands. The Hammond POTW may be utilized if it returns to compliance, as determined by the Agencies. If required, appropriate treatment standards prior to discharge to the POTW would have to be met. The specifics of the groundwater treatment process shall be implemented as determined by U.S. EPA, after reasonable opportunity for review and comment by the State, during design. The groundwater treatment process ~~is expected~~ may ~~to~~ include technologies such as ~~involving~~ air stripping, UV/Oxidation, chemical precipitation, and carbon absorption. ~~Waste R~~Residuals from the ground water pump and treat process will be sent off-site for disposal or recycling, as appropriate.

The Settling Defendants shall monitor the system's performance for a minimum of 30 years. U.S. EPA, after reasonable opportunity for review and comment by the State, may require adjustments or enhancements to the system as warranted by the performance data collected during operation. Examples of adjustments which U.S. EPA may require include, but are not limited to, additional groundwater extraction wells, increased pumping rates, pulsed pumping, injection wells, nutrient introduction and bioremediation.

If, after full operation of the groundwater extraction and treatment system for a period of at least five (5) years, and operation of the system following implementation of any and all modifications required by U.S. EPA, after reasonable opportunity for review and comment by the State, for at least three (3) years, Settling Defendants believe that it is technically impracticable to achieve the Cleanup Standards set forth above, then Settling Defendants may petition to U.S. EPA to modify the Cleanup Standards, based on a demonstration, in accordance with the provisions of Section 121(d)(4)(C) of